

REMARKS

In response to the Office Action mailed January 24, 2008, Applicants respectfully request reconsideration. Claims 1-54 were previously pending in this application. In this paper, Applicants are canceling claim 54 without prejudice or disclaimer. Claims 1, 5, 6, 10-14, 20-24, 27, 33, 35, 36, 39, 40, 45 and 53 have been amended. New claim 55 has been added. As a result, claims 1-53 and 55 are pending for examination with claims 1, 27 and 53 being independent claims. No new matter has been added.

I. Interview Summary

Applicants thank Examiner Chea for the courtesy of a telephone interview on May 27, 2008. During the Interview, proposed claim amendments were discussed. The Jones and Shankar references were also discussed.

The amendments and remarks made herein may serve as a further summary of the Interview.

II. Overview of the Disclosure

As an aid to the Examiner, Applicants provide a brief summary of the disclosure contained in the present application. This summary is not intended as a substitute for the Examiner reading the application in its entirety and is not intended to characterize the claims or any terms used in the claims, which are discussed individually below.

Briefly, the present application describes a file sharing system that is implemented by integrating a folder-based file system with a collaboration system. Through the system, members of the collaboration system can share, view, and modify files simultaneously. The information in the file as seen by all users of the collaboration system is synchronized as a result of changes communicated through the collaboration system.

Various advantages of this approach are described in the specification. For example, system resource utilization can be very low because the collaborating members do not need to continuously download updated copies of a file, or even to download copies at all, because

changes may be communicated as binary differential updates (§52) and downloads may be deferred until needed (§92).

An example of an embodiment of an interface between the collaboration system and the file system as it exists on the computer of one member of the collaboration system is illustrated in FIG. 3 of the application. A user interface is provided through a file sharing program that allows a user to identify files that are synchronized relative to other users (§53). A component, identified as a file system RAMP, registers with the file system and receives notifications from the operating system of changes to files managed by the system (§48).

When there is a change, the file system RAMP interacts with a component identified as a file synchronizer, which can determine whether the change in the file system represents a change to a file that has been synchronized (§50). The file system synchronizer in turn interacts with a document share engine that has been created for the synchronized file. The document share engine can represent changes to the file as binary differences, which can be communicated to other members of the collaboration system (§§115-116).

The interface between the collaboration system and the file system can also process changes made on other collaborating computers. When a collaborating member is invited to share a file, it may create a shared space for that file, including its own document share engine (§§86-92). A copy of the file may be created in that system's file system or information may be stored from which the file can be created, depending on settings for the device (§§93-94, 116-121).

Once a copy of a file is made available on other collaborating computers, changes to the file could be made in any of the collaborating computers. Accordingly, in addition to processing change information for the file that has been locally generated, each document share engine may receive data change requests (§114) from other collaborating members. Depending on settings, the externally generated changes can also result in updating of a synchronized version of the file on the local computer.

III. Objections to the Specification

The Office Action objected the specification because the specification contained embedded hyperlinks. Applicants have amended the specification to remove the embedded hyperlinks.

Accordingly, withdrawal of this objection is respectfully requested.

IV. Rejections Under 35 U.S.C. §101

The Office Action rejected claim 53 under 35 U.S.C. §101 because the claimed invention is purportedly directed to non-statutory subject matter. Applicants have herein replaced “a computer usable medium” with “a computer storage medium” as suggested by the Office Action. Accordingly, withdrawal of this rejection is respectfully requested.

The Office Action rejected claim 54 under 35 U.S.C. §101 because the claimed invention is purportedly directed to non-statutory subject matter. Claim 54 has been cancelled in this paper. Accordingly, withdrawal of this rejection is respectfully requested.

V. Rejections Under 35 U.S.C. §112

The Office Action rejected claims 9-10, 13-18, 35-36 and 39-44 under 35 U.S.C. §112, second paragraph, as being indefinite. In particular, claims 9, 13, 35 and 39 were rejected for reciting the limitation “each synchronized file.” Applicants have amended the claims and withdrawal of the rejections to claims 9, 13, 35, and 39 is respectfully requested.

Claim 20 was rejected for reciting the phrase “such as.” Applicants have herein removed the phrase “such as binary differences” from claim 20. Accordingly, withdrawal of the rejection to claim 20 is respectfully requested.

VI. Rejections Under 35 U.S.C. §103

The Office Action rejected claims 1-13, 19, 21-39, 45 and 47-54 under 35 U.S.C. §103(a) as purportedly being unpatentable over Jones et al. (U.S. Patent No. 7,149,959) and further in view of Shankar (U.S. Patent No. 7,080,124). Claims 14-18 and 40-44 were rejected under 35

U.S.C. §103(a) as being unpatentable over Jones in view of Shankar as applied to claims 13 and 39 above, and further in view of Therrien et al. (U.S. Patent No. 2004/0088382). Claims 20 and 46 were rejected under 35 U.S.C. §103(a) as being unpatentable over Jones in view of Shankar and further in view of Oprescu-Surcobe (U.S. Patent No. 6,356,961). Applicants respectfully traverse the rejections to the extent they are maintained over the claims as amended herein.

A. Discussion of Jones

Jones describes a system that has an application programming interface (API) that allows programs executing on a client computer to access architectural project information stored across the Internet on a server site (Abstract). The system of Jones describes software, which it refers to as ProjectPoint™, to download, upload, manage, and modify files that are shared across a network and stored in a server. In order to access a file in a collaborative network, a user logs on to a server (Col. 4, Lines 43-47). Then, using ProjectPoint™, which has a user interface, the user can perform several actions such as viewing, adding, editing, and updating files (Col. 10, Lines 23-26).

Several users can log on onto the server and access the file. A Project Files tab displays information about a selected project file and allows a user to modify the contents of the file (Col. 10, Lines 17-62). When a file is modified, the application program does not synchronize the latest version of that file with versions that are simultaneously available to other users. Instead, one user can inform another user of the updated file via email or through a discussion in the discussion tab (Col. 10, Lines 58-62, Col. 11, Lines 30-36). A modified file is only available to other users once the user who last modified the file uploads the entire file to a server (Col. 17, Lines 40-52). Though, the system can maintain on a server a list of new or changed files that have not been read by that user (Col. 28, lines 18-46).

B. Discussion of Shankar

Shankar is related to a system that facilitates viewing, managing, storing, and forwarding image files by multiple users. The images may be stored on a server, user's computer, or on another data storage device within the messaging system. Shankar describes editing of image

files, though in the context of images that have been downloaded or are to be uploaded to a server (Col. 6, lines 62-67).

Shankar describes that information about digital images may be shared between users, such as by using chat messages. Information may also be stored in files on the server for sharing among users who have accessed an image. These files with “meta-information” about the images can be downloaded when users log into the server so that a user who has received can have a synchronized copy of information about the file (Col. 7, lines 12-26).

C. Claim 1 and Its Dependent Claims

Applicants respectfully submit that Jones and Shankar, alone or in combination, fail to suggest or teach a method of providing information and services of a collaboration system that allows a plurality of members to interact collaboratively in a shared folder. Accordingly, the references do not teach all the limitations of claim 1. In Jones and Shankar, only a user who has modified a file knows what changes have been made to the file. User action is required for changes to be communicated to other members of a network, such as through instant messaging services and emails. Neither Jones nor Shankar suggests or teaches a system that can detect what changes have taken place in a file. Accordingly, there are multiple limitations of claim 1 not met by Jones and Shankar. For example, the references, even if combined, would not meet the limitation of element (c), which recites: “automatically determining changes made in the folder based file system.” Because no such determination is made in the references, subsequent steps that refer to the changes also are not met. For example, the limitation in element (d), which recites: “in response to a determined change, determining whether the change relates to the at least one synchronized file.”

Moreover, neither Jones nor Shankar describes use of the collaboration system to communicate file changes. Accordingly, the references, even if combined, would not meet the limitation of element (e), which recites: “communicating the change to other members via at least one data change message formatted in accordance with the data change format of the collaboration system.”

In view of the foregoing, claim 1, as amended, patentably distinguishes over Jones and Shankar and is in condition for allowance.

Claims 2-26 depend from claim 1 and are allowable based at least upon their dependency. In addition, each of the dependent claims recites limitations that may further distinguish over the references. For example, claim 5 recites: “in response to the user input identifying a synchronized file . . . creating a shared space within the collaboration system.” Because neither reference teaches or suggests the use of a collaboration system for enabling multiple members to interact collaboratively in a shared folder of a folder based file system, there is no reason that one of skill in the art would have used a collaboration system in the manner reflected in claim 5. Claims 6-8 similarly recite limitations that further distinguish the references.

Further, because Jones and Shankar do not relate to synchronizing user designated files within a folder based file system, there is no reason that one skilled in the art would have adopted the mechanism recited in claim 5 for identifying whether a designated synchronized file has changed.

As another example, neither Jones nor Shankar relates to synchronizing files among multiple users by communicating changes. To the contrary, each relates to a mechanism by which entire files are made available. Accordingly, there would have been no reason for one skilled in the art to incorporate the limitation of claim 20 into a system based on the combination of Jones and Shankar.

Similarly, there is no reason that one skilled in the art would have incorporated a document share engine as recited in claims 20-24 into such a system. Withdrawal of the rejection of claims 2-26 is kindly requested.

D. Claim 27 and Its Dependent Claims

As noted above, neither Jones nor Shankar describes use of a collaboration system to allow a plurality of members to interact collaboratively in a shared folder in a folder based file system that is part of an operating system. Accordingly, there are multiple limitations of claim 27 that are not met by the references, whether considered alone or in combination. For example, claim 27 recites: “a file synchronizer that determines a change made in the folder

based file system to at least one synchronized file.” Claim 27 further recites: “a document share engine that communicates the change to at least one of the plurality of members of the collaboration system at a second endpoint.” The claim further recites that the document share engine “receives changes to the at least one synchronized file from at least one of the plurality of members at the second endpoint.”

In view of the foregoing, claim 27, as amended, patentably distinguishes over Jones and Shankar. Withdrawal of the rejection of claim 27 is kindly requested.

Claims 28-52 depend from claim 27 and are allowable base at least on their dependency.

In addition, the dependent claims recite limitations that further distinguish over the references. For example, claims 35-37 recite additional details of the file synchronizer. Because neither reference shows or suggests a file synchronizer, there is no reason that one of skill in the art would have incorporated the limitations of claims 35-37 into a system as in Jones, even if modified according to Shankar.

E. Claim 53 and Its Dependent Claims

As noted above, neither Jones nor Shankar teaches a system in which services of a collaboration system are used to allow a plurality of members to interact collaboratively in a shared folder in a folder based file system that is part of an operating system. Accordingly, the file sharing systems of the references do not meet all limitations of claim 53. For example, the references, even if combined, do not describe “program code for using the collaborative interface to display information regarding the plurality of members collaborating within the context of the shared folder through the use of the collaborative system. Moreover, neither reference teaches or suggests “program code for receiving from the operating system an event notification indicating a change within the folder based file system.” Moreover, neither reference describes “program code for determining whether the change made in the folder based file system relates to the at least one shared folder.” Because neither reference describes program code for determining the nature of the changes, neither meets the more specific limitation of claim 53, which recites that the program code comprises “program code for maintaining a snapshot of at least one file in the shared folder.”

Moreover, because neither reference teaches or suggests use of a collaboration system to communicate changes, the references, even if combined, would not meet the limitation of claim 53, which recites: “program code for communicating the change to other members via the collaboration system.”

Claim 53 patentably distinguishes over Jones and Shankar, alone or in combination, for at least the reasons similar to those discussed in connection with claims 1 and 27. Accordingly, withdrawal of the rejection of claim 53 is kindly requested.

New claim 55 depends from claim 53 and should be allowed at least based on its dependency. In addition, claim 55 recites program code for receiving indication of changes from other members of the collaboration system “whereby the shared folder is synchronized among the members of the collaboration system.” For this additional reason, dependent claim 55 should be allowed.

VII. Additional Comments on Dependent Claims

Because each of the dependent claims depends from a base claim that is believed to be in condition for allowance, Applicants believe that it is unnecessary at this time to further argue the allowability of each of the dependent claims individually. However, Applicants do not necessarily concur with the interpretation of the dependent claims as set forth in the Office Action, nor do the Applicants concur that the basis for the rejection of any of the dependent claims is proper. Therefore, Applicants reserve the right to specifically address the patentability of the dependent claims in the future.

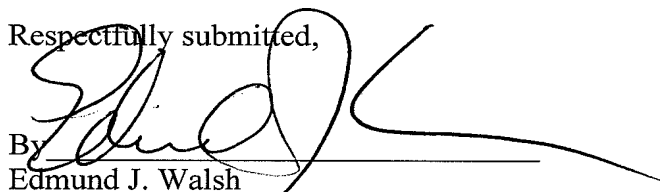
CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 23/2825, under Docket No. M1103.70267US00.

Dated: May __, 2008

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Edmund J. Walsh', is written over a horizontal line.

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